PBW

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December 9, 2011
(PBW Project No. 1651)

VIA ELECTRONIC MAIL AND FEDERAL EXPRESS

Mr. Chris Villarreal
Remedial Project Manager, 6SF-RA
U.S. Environmental Protection Agency Region 6
1445 Ross Avenue
Dallas, Texas 75202

Re: Bi-Monthly Progress Report, R&H Oil/Tropicana Energy Site, San Antonio, Texas

Dear Mr. Villarreal:

Pursuant to Section IX, Paragraph 37 of the Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study (Settlement Agreement) for the above-referenced Site, Pastor, Behling & Wheeler, LLC (PBW) has prepared this bi-monthly progress report on behalf of the Respondents named in the Settlement Agreement. In accordance with the Settlement Agreement requirements, this progress report addresses the topics listed below:

1. Actions which have been taken to comply with the Settlement Agreement during the preceding two-month period – The following actions were taken during the previous two-month period:

   - A Site clearing event was conducted on October 5-7, 2011.
   - RI/FS sampling and analysis activities were conducted at the Site on October 10 through October 13, 2011. This phase of work included the following activities:
     - Installation of sub-slab and soil gas sampling points, and collection of vapor samples;
     - Collection and analysis of groundwater samples from on-site and off-site monitoring wells;
     - Collection and analysis of surface water samples from the drainage ditch adjacent to the Site;
     - Collection and analysis of light non-aqueous phase liquid (LNAPL) from select wells at the Site.
   - Groundwater gauging and LNAPL thickness measurements collected during the site-wide sampling event on October 10, 2011 are provided on Table 1, attached.
   - A groundwater gauging and LNAPL thickness measurement event was conducted at the Site on November 16, 2011. The results of the gauging event are provided on Table 2, attached.

- Validation of laboratory analytical data in accordance with the project QAPP was partially performed (will be completed in December).

2. Quality-assured results of sampling, tests and all other quality-assured data received by Respondents during the preceding two-month period – The following quality-assured data were received during the preceding two-month period:

   - Groundwater quality field parameters measured during the site-wide groundwater sampling activities are summarized on Table 3, attached.

3. Work planned for next two months with schedules relating such Work to the overall project schedule for RI/FS completion – The following work is planned for the next two months:

   - Completion of data validation for data collected during the October 10-13, 2011 sampling activities.

   - Performance of slug tests at several on-site wells.

   - Performance of LNAPL baildown testing at several on-site wells.

   The planned schedule for this work is generally consistent with the overall RI/FS schedule provided in the approved RI/FS Work Plan.

4. Problems encountered, anticipated problems, actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays – The following problems or delays were encountered during the preceding two-month period:

   - One monitoring well, MW-15, did not produce sufficient groundwater for collection of a groundwater sample during the October groundwater sampling event.

   - Two LNAPL samples (MW-5 and MW-15) collected on October 10, 2011 were lost during transport to the laboratory; additional samples were collected and submitted to the laboratory on October 20, 2011.

Thank you for the opportunity to submit this progress report. Should you have any questions, please do not hesitate to contact me.

Sincerely,

PASTOR, BEHLING & WHEELER, LLC

Eric F. Pastor P.E.
Principal Engineer

Tim Nickels
Project Scientist

Attachments:
Table 1 Monitoring Well Gauging Summary – October 10, 2011
Table 2 Monitoring Well Gauging Summary – November 16, 2011
Table 3 Groundwater and surface water field measurements – October 11, 2011

cc: Marilyn Long – TCEQ
Leslie Alexander – de maximis, inc.
Lee Bishop – Exxon Mobil Corporation
Heather Corken – Fulbright & Jaworski, LLP
David Currier – Flint Group Incorporated
Gary Elkin – BAE Systems Resolution, Inc.
Jack Healy – Perkin Elmer Automotive Research, Inc.
Heidi Hughes Bumpers – Jones Day
Elizabeth Hurst – Structural Metals, Inc.
Larry King – Flint Group Incorporated
Earl Moran – Exxon Mobil Corporation
James Morriss, III – Thompson & Knight, LLP
Eva O'Brien - Fulbright & Jaworski, LLP
Mike Peters – Structural Metals, Inc.
Mary Smith - Office of the Attorney General of Texas
Robert Sterrett – Itasca Denver, Inc.
Rudy Valdes – National Radiator
Elizabeth Webb – Thompson & Knight, LLP

Table 1 - Monitoring Well Gauging Summary - October 10, 2011
R&H Oil/Tropicana Energy Superfund Site

Well ID	Date	Screen Interval (ft, BGS)	Measuring Point Elevation (ft, MSL)	Depth to Water (ft, BMP)	Depth to NAPL (ft, BMP)	NAPL Thickness (ft)	Water Level Elevation (ft, MSL)	Corrected Water Level Elevation (ft, MSL)
MW-1	10/10/2011	10-40	657.29	21.51	ND	--	635.78	635.78
MW-2	10/10/2011	11-42	659.25	23.71	ND	--	635.54	635.54
MW-3	10/10/2011	10-48	657.34	23.10	21.31	1.79	634.24	635.64
MW-4	10/10/2011	10-44	660.21	24.37	ND	--	635.84	635.84
MW-5	10/10/2011	10.5-43	656.93	22.82	21.002	1.818	634.11	635.53
MW-6	10/10/2011	10-54.5	656.95	21.51	21.34	0.17	635.44	635.57
MW-7	10/10/2011	30-45	655.13	19.78	ND	--	635.35	635.35
MW-8	10/10/2011	30-45	654.42	19.35	ND	--	635.07	635.07
MW-9	10/10/2011	25-40	654.17	18.78	ND	--	635.39	635.39
MW-10	10/10/2011	23-38	653.57	18.26	ND	--	635.31	635.31
MW-11	10/10/2011	25-40	654.55	19.02	ND	--	635.53	635.53
MW-12	10/10/2011	10-25	659.90	25.65	23.35	2.3	634.25	636.04
MW-13	10/10/2011	10-25	662.65	26.57	ND	--	636.08	636.08
MW-14	10/10/2011	10-25	660.17	25.40	24.2	1.2	634.77	635.71
MW-15	10/10/2011	10-25	659.94	27.55	23.83	3.72	632.39	635.29
MW-16	10/10/2011	10-25	659.20	23.64	ND	--	635.56	635.56
MW-17	10/10/2011	10-25	659.23	23.95	23.6	0.35	635.28	635.55
MW-18	10/10/2011	10-25	660.60	25.44	24.82	0.62	635.16	635.64
MW-19	10/10/2011	10-25	658.37	22.88	22.72	0.16	635.49	635.61
MW-20	10/10/2011	10-30	659.38	23.40	ND	--	635.98	635.98
NMW-1	10/10/2011	10-25	662.30	26.15	25.9	0.25	636.15	636.35
NMW-2	10/10/2011	10-25	660.61	24.88	ND	--	635.73	635.73
NMW-3	10/10/2011	10-25	660.63	25.49	24.52	0.97	635.14	635.90
NMW-4	10/10/2011	10-25	660.99	25.42	25.2	0.22	635.57	635.74
NMW-5	10/10/2011	10-25	660.45	24.62	ND	--	635.83	635.83

Notes:

1. Water levels in wells containing LNAPL were corrected using an LNAPL specific gravity of 0.78 as determined from analysis of LNAPL collected at well NMW-3.
2. ND - Measurable LNAPL thickness not greater than 0.01 feet. MSL = Mean sea level.
3. BMP = Below measuring point. BGS = Below ground surface.

Table 2 - Monitoring Well Gauging Summary - November 16, 2011
R&H Oil/Tropicana Energy Superfund Site

Well ID	Date	Screen Interval (ft, BGS)	Measuring Point Elevation (ft, MSL)	Depth to Water (ft, BMP)	Depth to NAPL (ft, BMP)	NAPL Thickness (ft)	Water Level Elevation (ft, MSL)	Corrected Water Level Elevation (ft, MSL)
MW-1	11/16/2011	10-40	657.29	21.70	ND	--	635.59	635.59
MW-2	11/16/2011	11-42	659.25	23.89	ND	--	635.36	635.36
MW-3	11/16/2011	10-48	657.34	23.65	21.48	2.17	633.69	635.38
MW-4	11/16/2011	10-44	660.21	24.60	ND	--	635.61	635.61
MW-5	11/16/2011	10.5-43	656.93	23.38	21.12	2.26	633.55	635.31
MW-6	11/16/2011	10-54.5	656.95	21.51	21.34	0.17	635.44	635.57
MW-7	11/16/2011	30-45	655.13	19.90	ND	--	635.23	635.23
MW-8	11/16/2011	30-45	654.42	19.50	ND	--	634.92	634.92
MW-9	11/16/2011	25-40	654.17	19.00	ND	--	635.17	635.17
MW-10	11/16/2011	23-38	653.57	18.43	ND	--	635.14	635.14
MW-11	11/16/2011	25-40	654.55	19.24	ND	--	635.31	635.31
MW-12	11/16/2011	10-25	659.90	25.61	23.28	2.33	634.29	636.11
MW-13	11/16/2011	10-25	662.65	27.43	26.57	0.86	635.22	635.89
MW-14	11/16/2011	10-25	660.17	25.49	24.31	1.18	634.68	635.60
MW-15	11/16/2011	10-25	659.94	27.82	23.98	3.84	632.12	635.12
MW-16	11/16/2011	10-25	659.20	23.85	ND	--	635.35	635.35
MW-17	11/16/2011	10-25	659.23	24.48	23.77	0.71	634.75	635.30
MW-18	11/16/2011	10-25	660.60	25.47	24.86	0.61	635.13	635.61
MW-19	11/16/2011	10-25	658.37	23.50	22.86	0.64	634.87	635.37
MW-20	11/16/2011	10-30	659.38	23.89	ND	--	635.49	635.49
NMW-1	11/16/2011	10-25	662.30	26.13	25.9	0.23	636.17	636.35
NMW-2	11/16/2011	10-25	660.61	25.11	ND	--	635.50	635.50
NMW-3	11/16/2011	10-25	660.63	25.79	24.77	1.02	634.84	635.64
NMW-4	11/16/2011	10-25	660.99	25.62	25.26	0.36	635.37	635.65
NMW-5	11/16/2011	10-25	660.45	24.86	ND	--	635.59	635.59

Notes:

1. Water levels in wells containing LNAPL were corrected using an LNAPL specific gravity of 0.78 as determined from analysis of LNAPL collected at well NMW-3.
2. ND - Measurable LNAPL thickness not greater than 0.01 feet. MSL = Mean sea level.
3. BMP = Below measuring point. BGS = Below ground surface.

Table 3 - Groundwater and Surface Water Field Measurements - October 2011
R&H Oil/Tropicana Energy Superfund Site

Well ID	Date	Water Quality Field Measurements						
		Temperature (°C)	pH	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)	Conductivity (umhos/cm)	Turbidity (NTUs)	Ferrous Iron (mg/L)
On-site Wells								
MW-1	10/12/2011	25.4	6.84	1.4	-141	1270	29	3.3
MW-2	10/12/2011	25.1	6.73	0.92	-125	1630	24	2.81
MW-3	10/12/2011	25.5	6.86	1.25	-110	1680	7.9	2.08
MW-4	10/12/2011	25.7	6.97	1.36	-122	1350	9.1	1.51
MW-5	10/12/2011	25.4	6.85	0.93	-129	1510	22	3.13
MW-6	10/12/2011	26.5	6.75	1.34	-127	1240	8.9	1.97
MW-12	10/12/2011	25.4	6.85	0.95	-127	1450	53	2.56
MW-13	10/12/2011	25.7	6.77	1.12	-128	1350	9.3	3.3
MW-14	10/12/2011	25.3	6.88	1.16	-143	1780	9.6	3.18
MW-16	10/11/2011	27.4	6.52	1.02	-136	1480	33	2.61
MW-17	10/11/2011	25.4	6.64	1.16	-141	1170	32	2.39
MW-18	10/12/2011	24.9	6.84	0.95	-107	1390	12	2.96
MW-19	10/12/2011	25.7	6.85	0.96	-98	1150	8.3	2.42
MW-20	10/12/2011	25.5	6.86	1.18	-47	1270	23	1.17
Off-site Wells								
MW-7	10/13/2011	25.7	6.93	0.92	-52	960	24	0.66
MW-8	10/13/2011	26.1	6.87	0.93	-152	670	30	1.64
MW-9	10/13/2011	25.6	6.85	1.17	-117	1360	8.9	0.3
MW-10	10/13/2011	25.2	6.84	0.92	-110	1530	8.7	0.22
MW-11	10/13/2011	25.6	6.83	1.05	-110	1650	7.9	0.34
Surface Water Samples								
SW-1	10/11/2011	25.9	5.9	2.7	nm	390	nm	nm
SW-2	10/11/2011	26.3	6.3	3.6	nm	310	nm	nm
SW-3	10/11/2011	26.7	6.3	2.9	nm	330	nm	nm
SW-4	10/11/2011	28.9	6.6	3.2	nm	300	nm	nm
SW-5	10/11/2011	27.3	6.7	3.4	nm	320	nm	nm

Notes:

1. nm = Not measured.